

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**DECLARATION FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**METHOD AND APPARATUS TO EFFECTIVELY REDUCE A NON-ACTIVE  
DETECTION GAP OF AN OPTICAL SENSOR**

the specification of which is attached hereto.

In the event that the filing date and/or Application No. are not entered above at the time I execute this document, and if such information is deemed necessary, I hereby authorize and request my attorneys/agent(s) at **Lahive & Cockfield, LLP**, 28 State Street, Boston, Massachusetts 02109, to insert above the filing date and/or Application No. of said application.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by an amendment, if any, specifically referred to herein.

I acknowledge the duty to disclose all information known to me that is material to patentability in accordance with Title 37, Code of Federal Regulations, § 1.56.

**FOREIGN PRIORITY CLAIM**

I hereby claim foreign priority benefits under Title 35, United States Code § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

☒ no such foreign applications have been filed

☐ such foreign application have been filed as follows:

ex

**EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS  
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION**

| Application Number | Country | Date of Filing | Priority Claimed<br>Under 35 USC 119 |
|--------------------|---------|----------------|--------------------------------------|
|                    |         |                | ___ Yes No ___                       |
|                    |         |                | ___ Yes No ___                       |
|                    |         |                | ___ Yes No ___                       |

**ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS  
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION**

| Application Number | Country | Date of Filing |
|--------------------|---------|----------------|
|                    |         |                |
|                    |         |                |
|                    |         |                |

**CLAIM FOR BENEFIT OF EARLIER U.S. PROVISIONAL APPLICATIONS**

I hereby claim priority benefits under Title 35, United States Code §119(e), of any United States provisional patent application(s) listed below:

☒ no such U.S. provisional applications have been filed.

☐ such U.S. provisional application have been filed as follows:

| Application Number | Date of Filing | Priority Claimed<br>Under 35 USC 119 |
|--------------------|----------------|--------------------------------------|
|                    |                | ___ Yes No ___                       |
|                    |                | ___ Yes No ___                       |
|                    |                | ___ Yes No ___                       |

**CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)**

I hereby claim the benefit under Title 35, United States Code, §120 of the United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose all information that is material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56 which became available to me between the filing date of the prior application and the national or PCT international filing date of this application:

☒ no such U.S./PCT applications have been filed.

☐ such U.S./PCT application have been filed as follows:

| Application Number | Relationship | Parent Application | Date of Filing |
|--------------------|--------------|--------------------|----------------|
|                    |              |                    |                |
|                    |              |                    |                |
|                    |              |                    |                |

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint:

|                        |        |                                     |        |                           |        |
|------------------------|--------|-------------------------------------|--------|---------------------------|--------|
| James E. Cockfield     | 19,162 | DeAnn F. Smith                      | 36,683 | Cynthia L. Kanik, Ph.D.   | 37,320 |
| Thomas V. Smurzynski   | 24,798 | Jeanne M. DiGiorgio                 | 41,710 | Theodore R. West          | 47,202 |
| Ralph A. Loren         | 29,325 | Megan E. Williams, Ph.D.            | 43,270 | Hathaway P. Russell       | 46,488 |
| Giulio A. DeConti, Jr. | 31,503 | Jeremiah Lynch                      | 17,425 | John S. Curran            | 50,445 |
| Elizabeth A. Hanley    | 33,505 | David J. Ridders                    | 43,882 | Lisa M. DiRocco           | 51,619 |
| Amy E. Mandragouras    | 36,207 | * Maria Lacotripe Zacharakis, Ph.D. |        | Danielle L. Herritt       | 43,670 |
| Anthony A. Laurentano  | 38,220 | Debra J. Milasincic                 | 46,931 | Cynthia M. Soroos, Sci.M. | 53,623 |
| Kevin J. Canning       | 35,470 | David R. Burns                      | 46,590 | Jonathan M. Sparks, Ph.D. | 53,624 |
| Jane E. Remillard      | 38,872 | Sean D. Detweiler                   | 42,482 | Merideth C. Arnold        | 52,568 |
|                        |        |                                     |        | Peter W. Dini, Ph.D.      | 52,821 |

\* Limited Recognition Under 37 C.F.R. § 10.9(b)

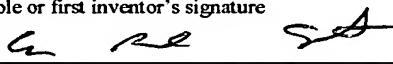
all of **Lahive & Cockfield, LLP**, 28 State Street, Boston, Massachusetts 02109, jointly, and each of them severally, my attorneys at law/patent agent(s), with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the U. S. Patent and Trademark Office connected therewith.

Please mail all correspondence to Ralph A. Loren at **Customer Number** 00959, whose address is:

**Lahive & Cockfield, LLP**  
28 State Street  
Boston, Massachusetts 02109

Please direct telephone calls to: Ralph A. Loren at (617) 227-7400.

Please direct facsimiles to: (617) 742-4214

|   |                              |
|---|------------------------------|
| Full name of sole or first inventor<br><b>Eric P. Krantz</b>  |                              |
| Sole or first inventor's signature<br> | Date<br><b>Oct. 10, 2003</b> |
| Residence<br><b>Ithaca, New York</b>  |                              |
| Citizenship <b>US</b>   |                              |
| Mailing Address<br><br><b>179 Sheffield Road<br/>Ithaca, New York 14850</b>   |                              |

|   |      |
|---|------|
| Full name of second inventor, if any<br><b>Douglas J. DeAngelis</b>                 |      |
| Second inventor's signature   | Date |
| Residence<br><b>Ipswich, Massachusetts</b>  |      |
| Citizenship <b>US</b>   |      |
| Mailing Address<br><br><b>28 Turkey Shore Road<br/>Ipswich, Massachusetts 01938</b> |      |

|                                     |      |
|-------------------------------------|------|
| Full name of third inventor, if any |      |
| Third inventor's signature          | Date |
| Residence                           |      |
| Citizenship                         |      |
| Mailing Address                     |      |

|                                      |      |
|--------------------------------------|------|
| Full name of fourth inventor, if any |      |
| Fourth inventor's signature          | Date |
| Residence                            |      |
| Citizenship                          |      |
| Mailing Address                      |      |

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| Kevin J. Canning       | 35,470 | David R. Burns                       | 46,590 | Jonathan M. Sparks, Ph.D. | 53,624 |
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|                        |        |                                      |        | Peter W. Dini, Ph.D.      | 52,821 |

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all of **Lahive & Cockfield, LLP**, 28 State Street, Boston, Massachusetts 02109, jointly, and each of them severally, my attorneys at law/patent agent(s), with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the U. S. Patent and Trademark Office connected therewith.


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28 State Street  
Boston, Massachusetts 02109

Please direct telephone calls to: Ralph A. Loren at (617) 227-7400.

Please direct facsimiles to: (617) 742-4214

|   |      |
|---|------|
| Full name of sole or first inventor<br><b>Eric P. Krantz</b>                |      |
| Sole or first inventor's signature  | Date |
| Residence<br><b>Ithaca, New York</b>  |      |
| Citizenship <b>US</b>   |      |
| Mailing Address<br><br><b>179 Sheffield Road<br/>Ithaca, New York 14850</b> |      |

|  |                        |
|--|------------------------|
| Full name of second inventor, if any<br><b>Douglas J. DeAngelis</b>  |                        |
| Second inventor's signature<br> | Date<br><b>9-27-03</b> |
| Residence<br><b>Ipswich, Massachusetts</b>   |                        |
| Citizenship <b>US</b>  |                        |
| Mailing Address<br><br><b>28 Turkey Shore Road<br/>Ipswich, Massachusetts 01938</b>                              |                        |

|                                     |      |
|-------------------------------------|------|
| Full name of third inventor, if any |      |
| Third inventor's signature          | Date |
| Residence                           |      |
| Citizenship                         |      |
| Mailing Address                     |      |

|                                      |      |
|--------------------------------------|------|
| Full name of fourth inventor, if any |      |
| Fourth inventor's signature          | Date |
| Residence                            |      |
| Citizenship                          |      |
| Mailing Address                      |      |